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## AEROPLANE'S SPLENDID FLIGHT

(London Daily Mail.)

A Magnificent feat was accomplished by the British aeroplanist, Mr. Henry Farman, On Monday, a feat that will make January 13, 1908, a red-letter day in the annals of aviation. For the first time a man rose from the earth in a heavier-than-air machine, and at an even distance of 25 feet from the ground flew in a complete circle in the air at an average speed of thirty-four miles an hour a distance of 1,630 British yards, returning to his exact starting point.

The remarkable sight roused the spectators to the highest pitch of enthusiasm, and won for the plucky Henry Farman the Deutsch-Archdeacon grand prize of L2,000 for the first circular flight of a kilometre, 1,093 yards. Thus will his name be handed down to posterity as the first to succeed in controlling an aeroplane.

On Saturday, in the presence of a small crowd of spectators, Mr. Farman was so successful in several trial flights that he resolved at once to make a definite attempt to win the prize. He therefore summoned the Aero Club committee for Monday morning on the Issy drill ground, and promptly at nine o'clock the commission arrived. Mr. Farman was in the shed, busy with the help of his men in preparing his machine for flight. The committee of the Aero Club, as well as many well-known aeronauts and people interested

in flying machines, were present. Among them were Prince Bibesco, Count de la Vauix, M. Voissin, Lord and Lady Northcliffe, M. Clement, M. Bleriot, M. Deutsch de la Meaurthe, and Baron de Crambez.

MOTOR-CAR IN PURSUIT.

The morning was bright with sunshine, and there was scarcely a breath of wind. A line was drawn on the ground fifty yards long, and from the centre of this line a course was marked off 500 yards in length, at the end of which a flagstaff was planted. The task set for Mr. Farman was to rise from the ground before he crossed the line and to make a flight round the flagstaff and return to his starting point again, a total distance of one kilometre.

By ten o'clock all was ready, and at 10:18 Mr. Farman, having started his 50-h.p. Autoinette motor, gave the word to let go. The machine at the time of starting was about forty yards behind the starting line.

After running rapidly along the ground, the aeroplane, when about five yards from the line, rose nine or ten feet, and crossed at that height. Then Mr. Farman made a wide circuit, gradually rising to a height of twenty-five feet. The excitement became intense. Mr. Farman's brother Maurice, in a 40-h.p. motor, dashed after the fast-moving aeroplane, and tried to keep up with it.

Then 150 yards beyond the flag-post which marked the end of the course the aeroplane made a graceful swooping movement, turning a half-circle far on the outside of the

flag-post, and came racing back on the otherside towards the starting point. Shouts broke out: "Bravo, Farman!" "Keep it up!" "Hurrah!" Amid intense enthusiasm, Mr. Farman, as he neared the goal, gradually lowered his helm. As he crossed the line he stopped his motor and came down gently to earth at the spot from which he had started.

VICTOR KISSED

The prize was won. No hitch of any kind had occurred. The time-keeper shouted out that the flight had been made in one minute and twenty-eight seconds. There was a rush of the fifty or sixty spectators to the machine. Everybody stretched out a hand to Mr. Farman, who was lifted out of his seat, hugged, and slapped on the back, while M. Deutsch de la Meurthe, taking off his hat, kissed the blushing winner on both cheeks. Next came the turn of the boisterous and exuberant M. Archdeacon to embrace Mr. Farman. The two donors of the prize carried him off to lunch at the Automobile Club, where his health was drunk by a large company.

MR. HENRY FARMAN DESCRIBES HIS SUCCESSFUL FLIGHT.

I have won the prize of L2,000 offered by M. Deutsch and Archdeacon to the first inventor who flew in a circle in an aeroplane, and I am glad to be able to give the Over-Seas "Daily Mail" readers my impressions of my successful flight.

On Saturday I took the aeroplane out in the afternoon, and made a flight of nearly two kilometers in a circle.

This decided me to call out the committee for Monday morning. I was in the field early making preparations.

When the committee declared that they were ready I got into the seat of the aeroplane. I must admit that I felt a little excited, but at no time during the flight did I feel nervous in the least. I shouted out to the men behind to let go. The machine flew along the ground for a second or two and then I felt the earth dropping away from me. I regulated the elevating planes, and I rose higher still. I had to use some caution when crossing the starting line, for a yard outside this would have meant another trial.

After having got safely away from the starting point, I made for the flagstaff at the other side of the field which I had to fly round. The machine worked beautifully, and I felt confident of my success. Indeed, at no time throughout the flight did I lose courage, for I had determined to win the prize, even at the risk of accident. My confidence in the aeroplane was not misplaced, for in coming round the flagpost, with half the journey accomplished, the machine was flying even better than ever. It was only a matter of a few seconds then until I was over the ground in front of the starting line, which I had to recross in the air.

As I was approaching the end, I felt greater confidence in myself, and to show the onlookers that I was going to win I put up my hand and waved at them. It was then that they began cheering, for the line was crossed again and

I had at last won the much coveted prize.

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Henry Farman. HOW I LEARNED TO FLY.

My personal belief is that the future of the aeroplane--i.e., the immediate future, for of course, I cannot speak beyond my ken--lie sin a combination of the Bleriot machine and of the cubic cellular aeroline that has been used both by Santos Dumont and myself. Although I think aeroplanes are still in their infancy, and must for some time remain purely a sporting occupation, yet I can foresee the day when aeroplane omnibusses will travel from Paris to London in five hours. I myself cherish the hope of travelling in an aeroplane from Paris to Rouen, within the next two years, in sixty minutes.

MY FIRST ATTEMPT AND FAILURE.

I am perfectly sure that within twelve months you will have aeroplanes which will be able to fly from fifty to a hundred miles quite easily, and at an insignificant cost as compared with the cost of running a motor-car over the same distance. If, instead of the drillground at Issy, I were able to fly over the plains of the Beauce, I think that, even with my own primitive machinery, I could fly over twenty or thirty miles without any difficulty.

It is necessary, however, not to be hampered by houses or other obstacles, for, if one of the wings or any other portion of the apparatus were to come into collision, however slightly, with the roof of a house or the branch of

a tree, the aeroplane would in all probability immediately overturn.

When, after numerous experiments with models, I had built my first full-sized machine and tried my motor, a 40-h.p. motor weighing 100 kilogrammes, I brought it out for trial. The entire apparatus, with the motor included, weighed 500 kilogrammes, or about a ton. I was full of hope, and perfectly convinced that I was going to fly at once. I was quickly undeceived, however, for, although the apparatus skimmed along the ground at a great rate, it obstinately refused to quit motherearth.

At last, one morning, having made a further change in the tail, I started out, and, after running along the ground for a couple of hundred yards, I felt the machine rising under me into the air, greatly to my delight; but after a short leap of fifty yards or so I came down to earth again.

SEARCH FOR THE CENTRE OF GRAVITY

For a whole month I experimented, changing the position of the scow fans or propellers, regulating my motor, and making sundry changes to the gear aft, Finally, one morning, in the presence of some fifty persons, I succeeded in rising from the ground and making a flight of several hundred yards. I had discovered the long-sought "knack," for so I must call it. Instead of making a mere bound or jump, I was able to keep up a soaring movement and remain in the air some six feet above the ground. I could easily have risen to a height of fifty or sixty feet or more, had

I so desired, but that would have been extremely dangerous and foolhardy, for had I lost my equilibrium the machine would have probably turned right over, and I should in all probability have been killed. In all my flights, therefore, I have carefully aimed at remaining within a safe distance of the earth.

Many people who had made a study of aeroplanes had told me that I would never fly so long as I placed my motor seat high up instead of below the apparatus. My friends endeavored to prove to me that it was materially impossible for me to fly with such a weight above instead of below the apparatus. My many experiments with models, however, had led me to hold a contrary opinion, and experience has proved that I was not wrong.

It must be borne in mind that it is a very difficult matter to define where the centre of gravity is when one is in the air without any connection with the ground, and I very soon discovered that the centre of gravity ought not to be below the apparatus, but at a point between the principal planes, very near to, but not quite in, the centre of the rear portion of the apparatus. I also found out that the centre of gravity and the centre of pressure of the propeller were not the same, so that I had to creat a compensating balance between the two gravities.

After three or four flights I felt as much at home in the air as though I were riding a bicycle.

Then came two important problems to be solved. It was all very well to be able to rise in the air, and to come down again without danger; but I could only fly in a straight line. I had yet to learn to turn, and also to maintain my equilibrium in the air. I could scarcely get any sleep for thinking of how I could solve these difficulties. I was always up and off to my shed before daybreak, trying all sorts of experiments with the rudder and with the rudder and with the propellers.

THE MATTER OF STEERING.

I soon began to find that by turning the rudder suddenly to the left and swinging my body over to that side the aeroplane veered to the left, and I began to plunge myself very much in the position of the expert cyclist who can pedal very fast with his hands in his pocket, and who without touching the handlebars can veer to the left or to the right by throwing the weight of his body on either side. Presently I succeeded in making a half circle, and then a complete circle. I had succeeded in solving the difficulty of turning to the left or right as desired, but it took me a long time to discover the exact proportion of effort, the precise turn to give the helm.

There still remains the most difficult question of all-that of equilibrium. This question is a very complicated one, because in the air there are four essential kinds of equilibrium to be mastered.

Let us again take the example of the man on a bicycle;

he has only two forms of equilibrium to study--that of the right and of the left. But the man in a flying machine--i.e., an aeroplane--has not only to consider the left and the right, but also a plunging movement forward and a tilting movement to the rear. Nor is this all, for besides these four cardinal points the machine may take a plunge or suddenly move up at any angle, and it is a most intricate calculation to have to bear all this in mind while flying and handling one's motor and helm. For this reason I have come to the conclusion quite recently, as a result of the many difficulties I have had to encounter, that--in the present state of knowledge on the subject--it is only a small number of persons who will be able to make successful flights in a heavier-than-air machine.